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Shinya Tsukizaki

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EXAMINER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/902,224	TSUKIZAKI, SHINYA	
	Examiner	Art Unit	
	Jason M. Repko	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

3. Claim 1 recites the limitation "said display device" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

4. Claims 4, 5 and 16 are objected to under 37 CFR 1.75 as being a substantial duplicates of claims 1, 3 and 14, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,325,717 to Kawagoe et al. in view of "Sonic Adventure Operation Guide," January 7, 1999, ASCII Corporation ("Sonic Adventure") as evidenced by Japanese Office Action (Questioning) mailed May 30, 2006 ("JPO Office Action").**

Claims 1, 2, 14, 15 and 19

4. With regard to claim 1, Kawagoe et al. discloses "a recording medium (20 shown in Figure 1) comprising a recorded program and data to be used in a program execution system (40) including a program execution device that executes various programs (lines 3-7 of column 7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs."), at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device (lines 21-24 of column 6: "The joystick 45 includes X-axis and Y-axis photo-interrupters in order to decompose a lever inclination into X-axis and Y-axis components, generating pulses in number proportional to the inclination."), wherein

- a. along with a motion of any character on said display device, based on an operation instruction about a character motion direction (*lines 31-35 of column 6: "Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."*), a switching (*lines 42-44 of column 14: "...the camera is switched depending upon a position of the player object (X-Y coordinate position)...."*) is made from a first fixed viewing (*lines 53-56 of column 13: "...the fifth camera is a fixed camera..."*) perspective to a second fixed viewing perspective (*lines 15-16 of column 14: "...the fourth camera fixedly provided at the position shown in FIG. 11..."*) on said display device (*lines 16-23 of column 13: "Note that in FIG. 11 the terms "first camera", "second camera", . . . , "fifth camera" given in blocks...when the player object is existing in one block, the player object will be taken by a camera corresponding to a camera code having been set on that block."*).
5. Kawagoe et al. discloses two operative control modes where the player continues the action and one where the player has stopped an action in lines 37-46 of column 12:
- If in a course of action, a position and pose of the player object are determined so that the player object continues its action... If the player object is not in a course of action, the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45.*

6. However, Kawagoe et al. does not expressly disclose “said recorded program has a direction maintenance step by which if, said operation instruction is maintained, the direction of motion of said character in said second fixed viewing perspective is maintained in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least immediately before the switching is made.” Sonic Adventure discloses “said recorded program has a direction maintenance step by which if, said operation instruction is maintained, the direction of motion of said character in said second fixed viewing perspective is maintained in coordination with the direction of motion of the character on a map in said first fixed viewing perspective at least immediately before the switching is made.” See description of “ACTION! PRESS THE UP BUTTON,” page 37.

7. To the extent there is any doubt that Sonic Adventure teaches the claimed limitation as set forth in the claim, and that such a characteristic is necessarily present, Applicant’s attention is invited to the JPO Office Action, as extrinsic evidence of such an element. See MPEP 2131.01. JPO Office Action discloses on page 5 that:

Thus, in “SONIC ADVENTURE” mentioned above, an object can be moved in the same direction on the world coordinates “even after said viewpoint is switched if said operational input is maintained from before said viewpoint is switched until after said viewpoint is switched.”

8. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the direction maintenance as disclosed in Sonic Adventure in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera

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angle as the player traverses the camera areas shown in Figure 11. Therefore, it would have been obvious to combine Kawagoe with Sonic Adventure to obtain the invention specified in claim 1.

9. With regard to claim 2, Kawagoe et al. discloses "said first fixed viewing perspective on said display device is to be drawn based on a coordinate transformation based on a first viewpoint and said second fixed viewing perspective on said display device is to be drawn based on a coordinate transformation based on a second viewpoint" (*lines 31-35 of column 6: "Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."*; *lines 26-31 of column 11: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."*). Kawagoe et al. does not expressly disclose "said direction maintenance step has a computation step that computes said direction of motion of said character based on said first viewpoint." Sonic Adventure teaches the object can be moved in the same direction on the world coordinates across viewpoints. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to compute the direction of motion based on the first viewpoint because in order to maintain the same direction knowledge of that direction with respect to the first viewpoint is useful if not essential.

10. Kawagoe et al. does not disclose "said direction maintenance step has a computation step that computes said direction of motion of said character based on said first viewpoint." (

11. With regard to claim 14, Kawagoe et al. discloses an action is maintained for as long as said operation instruction is maintained by the user (*lines 37-46 of column 12*). Kawagoe et al.

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does not expressly disclose “said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user.” Sonic Adventure discloses “said direction of motion of said character in said second fixed viewing perspective is maintained for as long as said operation instruction is maintained by said user.” See description of “ACTION! PRESS THE UP BUTTON,” page 37. See also JPO Office Action page 5 (*concluding an object can be moved in the same direction on the world coordinates “even after said viewpoint is switched if said operational input is maintained from before said viewpoint is switched until after said viewpoint is switched.”*).

12. Claim 15 is met by the combination of Kawagoe et al. and Sonic Adventure, wherein Sonic Adventure discloses “said character motion direction is continuous from said first fixed viewing perspective to said second fixed viewing perspective,” which follows from the fact that the object in Sonic Adventure is moved in the same direction before and after the switch.

13. Claim 19 is met by the combination of Kawagoe et al. and Sonic Adventure, wherein Kawagoe et al. discloses “switching from the first fixed viewing perspective to the second viewing perspective is discontinuous” (*lines 13-20 of column 14: “As will be understood from FIG. 18, the fourth camera fixedly provided at the position shown in FIG. 11, in the step S620 wherein at immediately after camera change over, takes as a distant view the player object entering the door. That is, the fourth camera takes a comparatively wide range including the player object.”*).

Claims 3, 5 and 8

14. With regard to claim 3, Kawagoe et al. discloses “a recording medium comprising a program and data recorded (*20 shown in Figure 1; lines 3-7 of column 7: “The external ROM 21*

includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.") thereon and which are to be used in a program execution system including a program execution device (44 of Figure 1) that executes various programs (10 in Figure 1), at least one operation device (45 of Figure 1) into which are inputted operation requests by a user as operation instructions (S503-S506 of Figure 9) to said program execution device (44 of Figure 1), and a display device that displays images output from said program execution device (30 as shown in Figure 1), wherein said program comprises:

- b. a first computation step which determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user (*lines 31-35 of column 6: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."*) as seen from a first viewpoint (*lines 26-31 of column 11: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."*),
- c. a viewpoint switching step that switches viewpoints if necessary, based on said position coordinates of said character (*lines 42-44 of column 14: "...the camera is switched depending upon a position of the player object (X-Y coordinate position)...."*),

- d. a second computation step which determines at least position coordinates of the character in the scene on the display device from a motion vector of the character based on an operation inputted by the user (*lines 31-35 of column 6*) as seen from a second viewpoint switched by the viewpoint switching step (*lines 26-31 of column 11; lines 16-23 of column 13: "Note that in FIG. 11 the terms "first camera", "second camera", . . . , "fifth camera" given in blocks...when the player object is existing in one block, the player object will be taken by a camera corresponding to a camera code having been set on that block."*),
- e. an image drawing step that draws a three-dimensional image of said character based on said current viewpoint, in accordance with said position coordinates of said character obtained by said first computation step and said second computation step (*lines 6-10 of column 2: "...image signal generating means for generating an image signal due to shooting the player object by a virtual camera selected by the camera selecting means."*).
15. Kawagoe et al. discloses two operative control modes where the player continues the action and one where the player has stopped an action in lines 37-46 of column 12. Kawagoe et al. does not expressly disclose "wherein the second computation step to determine position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation." Sonic Adventure discloses "wherein the second computation step to determine position coordinates of the character in the scene after switching the viewpoint, as long as an operation is inputted by the user before switching the viewpoint, by using the

motion vector of the character motion based on the operation.” See description of “ACTION! PRESS THE UP BUTTON,” page 37.

16. To the extent there is any doubt that Sonic Adventure teaches the claimed limitation as set forth in the claim, and that such a characteristic is necessarily present, Applicant’s attention is invited to the JPO Office Action, as extrinsic evidence of such an element. See MPEP 2131.01. JPO Office Action discloses on page 5 that:

Thus, in “SONIC ADVENTURE” mentioned above, an object can be moved in the same direction on the world coordinates “even after said viewpoint is switched if said operational input is maintained from before said viewpoint is switched until after said viewpoint is switched.”

17. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the direction maintenance as disclosed in Sonic Adventure in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera angle as the player traverses the camera areas shown in Figure 11. Therefore, it would have been obvious to combine Kawagoe with Sonic Adventure to obtain the invention specified in claim 3.

18. Claim 5 recites limitations similar in scope to those presented in claim 3, and is rejected with the rationale presented in the rejection of claim 3.

19. With regard to claim 8, Kawagoe et al. discloses “a program execution system (40 in Figure 1) comprising:

- f. a program execution device (10 in Figure 1) having a controller, and executing various programs (lines 3-7 of column 7: “The external ROM 21 includes a plurality of

memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.");

g. at least one operation device (45 of Figure 1) into which are inputted operation requests by a user as operation instructions to said program execution device (S503-S506 of Figure 9);

h. a display device that displays images outputted from said program execution device (30 as shown in Figure 1).

20. The remainder of the claim recites limitations similar in scope to those presented in claim 3, and are rejected with the rationale presented in the rejection of claim 3.

21. Claim 10 recites limitations similar in scope to those presented in claim 8, and is rejected with the rationale presented in the rejection of claim 8.

Claims 11 and 12

22. Claim 11 recites limitations similar in scope to those presented in claim 3 with exceptions (as discussed below), and those limitations are rejected with the rationale presented in the rejection of claim 3.

23. With regard to the viewport switching step in claim 11, Kawagoe et al. discloses "said second viewpoint having associated therewith a second motion coordinate system that differs from said first motion coordinate system" (lines 31-35 of column 6: "Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."; lines 26-31 of column 11: "In the step S7 a camera process is carried out. For

example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."). Cameras four and five have a different line of sight (*lines 13-20 of column 14*). Thus, it follows that a second motion coordinate system that differs from said first motion coordinate system because "a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player" (*lines 26-31 of column 11*).

24. With regard to the second computation step in claim 11, Kawagoe et al. does not disclose "said motion vector based on an operation inputted by the user as seen from said second viewpoint by said maintained operation instruction in accordance with said first motion coordinate system." Sonic Adventure teaches the object can be moved in the same direction on the world coordinates across viewpoints. See description of "ACTION! PRESS THE UP BUTTON," page 37. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to base the motion vector on an operation inputted by the user as seen from said second viewpoint by said maintained operation instruction in accordance with said first motion coordinate system because knowledge of that motion vector with respect to the first viewpoint is useful, if not essential, in maintaining the direction of the action across camera areas.

25. With further regard to the second computation step in claim 11, Kawagoe et al. discloses "an image drawing step that draws a three dimensional image of said character" (*S8 in figure 7; See FIGS. 16, 18 or 19 showing 3D images*), "on said first or second display device viewpoint, in accordance with said position coordinates of said character obtained by said first computation

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step and said second computation step” (lines 31-35 of column 6: “Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor.”; lines 26-31 of column 11: “In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player.”).

26. With regard to claim 12, Kawagoe et al. discloses “said motion vector of said character in said second display device viewpoint is determined in accordance with said second motion coordinate system once said maintained operation instruction is terminated” (lines 37-46 of column 12: “If the player object is not in a course of action, the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45”). Specifically, once the moving direction is determined according to the current viewpoint, and the user reenters an operation state of the joystick then the action is determined with respect to the new viewpoint as shown by lines 26-31 of column 11. See also Kawagoe’s discussion of exiting one area and entering another in lines 55-65 of column 13, where the player object’s direction and action are continued. However, once the operating instruction is terminated then movement and direction are determined according to the processing described in lines 37-46 of column 12.

Claims 4 and 16

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27. Claims 4 and 16 recite limitations similar in scope to those presented in claims 1 and 14, respectively, and are rejected with the rationale presented in the rejection of claims 1 and 14.

Claims 6, 7 and 17

28. With regard to claim 6, Kawagoe et al. discloses “A program execution system (40 in Figure 1) comprising: a program execution device (10 in Figure 1) having a controller that executes various programs (lines 3-7 of column 7: “The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as “areas”), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.”); at least one operation device (45 of Figure 1) into which are inputted operation requests by a user as operation instructions to said program execution device (S503-S506 of Figure 9).” The remainder of the claim recites limitations similar in scope to those presented in claim 1, and are rejected with the rationale presented in the rejection of claim 1.

29. Likewise, claims 7 and 17 recite limitations similar in scope to those presented in claims 2 and 14, and are rejected with the rationale presented in the rejection of claims 2 and 14.

Claims 9 and 18

30. With regard to claim 9, Kawagoe et al. discloses “a program execution device (10 in Figure 1) to which can be connected at least an operation device (45 of Figure 1) that outputs operation requests by a user as operation instructions (S503-S506 of Figure 9), said program execution device comprising.” The remainder of the claim recites limitations similar in scope to those presented in claim 1, and are rejected with the rationale presented in the rejection of claim 1.

31. Claim 18 recite limitations similar in scope to those presented in claim 14, and are rejected with the rationale presented in the rejection of claim 14.

Claim 13

32. With regard to claim 13, Kawagoe et al. discloses “a program execution system (40 in Figure 1) comprising:

- i. a program execution device (10 in Figure 1) having a controller, and executing various programs (lines 3-7 of column 7: “The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as “areas”), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.”);
- j. a display device that displays images outputted from said program execution device (30 as shown in Figure 1);
- k. at least one operation device into which are inputted operation requests by a user as operation instructions (S503-S506 of Figure 9; 45 of Figure 1) to said program execution device, said operation instructions associated with movements of a character displayed on said display device (lines 31-35 of column 6: “Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor.”);
- l. said display device further comprising a first viewpoint in which movements of said character is controlled in accordance with a first movement coordinate system, and a second viewpoint in which movements of said character is controlled in accordance with

a second movement coordinate system (*lines 26-31 of column 11: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."; note that different cameras have different lines of sight*),

m. an image processing means configured as a controller program that operates in said controller in said program execution device (*442 control circuit*), wherein said image processing means further comprises:

n. a first computation means that determines position coordinates of said character in said first display device viewpoint, said position coordinates based on a first motion vector of said character in said first display device viewpoint in accordance with operation instructions (*lines 31-35 of column 6: " Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor."*),

o. a viewpoint switching means that switches from said first display device viewpoint to said second display device viewpoint if necessary based on said position coordinates of said character (*lines 42-44 of column 14: "...the camera is switched depending upon a position of the player object (X-Y coordinate position)...."*),

p. a second computation means that determines position coordinates of said character in said second display device viewpoint, said position coordinates based on a second motion vector of said character in said second display device viewpoint in

accordance with operation instructions (*operates the same as the first described in lines 31-35 of column 6; lines 26-31 of column 11*), and

q. an image drawing means that draws a three-dimensional image of said character in said first or second display device viewpoint, in accordance with said position coordinates of said character obtained by said first computation means and second computation means respectively (*lines 31-35 of column 11: "In the step S8 the RSP 122 performs a rendering process. That is, the RCP 12 under the control of CPU 11 performs transformation (coordinate transformation and frame memory rendering) on the image data to display a movable object..."*),

r. the movement of said character is consistent between first and second display device viewpoints while said operation instruction is maintained during and immediately after said switch between said viewpoints (*See Kawagoe's discussion of exiting one area and entering another in lines 55-65 of column 13, where the player object's direction and action are continued.*),

s. once said operation instruction is terminated after said switch from said first display device viewpoint to said second display device viewpoint, said second motion vector governing movement of said character in said second display device viewpoint is controlled in accordance with said second movement coordinate system (*lines 37-46 of column 12: "If the player object is not in a course of action, the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to*

an operation state of the joystick 45"; Specifically, once the moving direction is determined according to the current viewpoint, and the user reenters an operation state of the joystick then the action is determined with respect to the new viewpoint as shown by lines 26-31 of column 11.)

t. said second motion vector governing movement of said character in said second display device viewpoint is controlled in accordance with said second movement coordinate system (*second and subsequent vectors will be determined according to the processing described in lines 31-35 of column 6*).

33. Sonic Adventure shows wherein if said operation instruction is maintained during a switch from said first display device viewpoint to said second display device viewpoint, said second motion governing movement of said character in said second display device viewpoint is controlled in accordance with said first movement coordinate system, wherein said second computation means and said image drawing means are repeatedly executed for as long as said operation instruction is maintained by said user (See description of "ACTION! PRESS THE UP BUTTON," page 37).

34. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the direction maintenance as disclosed in Sonic Adventure in the game system disclosed by Kawagoe et al. The motivation for doing so would have been to eliminate the need for a player to abruptly change the direction on the joystick to accommodate a change in camera angle as the player traverses the camera areas shown in Figure 11. Therefore, it would have been obvious to combine Kawagoe with Sonic Adventure to obtain the invention specified in claim

Claim 20

35. With regard to claim 20, Kawagoe et al. discloses "a program execution system (40 in *Figure 1*) comprising:

- u. a program execution device having a controller (44 in *figure 4*), and executing various programs (20 shown in *Figure 1*; lines 3-7 of column 7: "The external ROM 21 includes a plurality of memory areas (may be hereinafter referred merely to as "areas"), i.e., a program area 22, an image data area 23 and a sound memory area 24, which are memorized previously and fixedly with various programs.");
- v. at least one operation device into which are inputted operation requests by a user as operation instructions to said program execution device (S503-S506 of *Figure 9*; 45 of *Figure 1*);
- w. a display device that displays images outputted from said program execution device (30 as shown in *Figure 1*).; and
- x. an image processing means configured as a program (22 in *Figure 5*) that operates in said controller in said program execution device (lines 3-7 of column 7);
- y. wherein said image processing means includes:
 - i. a first computation means that determines at least position coordinates of a character in a scene on the display device from a motion vector of the character based on an operation inputted by the user (lines 31-35 of column 6: "Accordingly, the resultant X-axis and Y-axis vector determined by the count values of the counters 444X and 444Y serves to determine a moving direction and a coordinate position of the player object or hero character or a cursor.") as seen

from a first viewpoint (*lines 26-31 of column 11: "In the step S7 a camera process is carried out. For example, a coordinate of a visual point to the object is calculated such that a line or field of sight as viewed through a viewfinder of the virtual camera comes to an angle designated through the joystick 45 by the player."*),,

ii. a viewpoint switching means that switches a current viewpoint if necessary based on said position coordinates of said character (*lines 42-44 of column 14: "...the camera is switched depending upon a position of the player object (X-Y coordinate position)...."*),

iii. an operation input decision means that decides whether an operation input from at least one operation device maintains before and after the viewpoint switching means switches the current viewpoint (*lines 37-46 of column 12: "If in a course of action, a position and pose of the player object are determined so that the player object continues its action... If the player object is not in a course of action, the CPU 11 in the following step S503 detects an operation state of the joystick 45 (FIG. 1, FIG. 4) included in the controller 40. Subsequently, a moving direction, moving speed and position and pose of the player object are determined respectively in steps S503, S504 and S505, according to an operation state of the joystick 45."*); and

iv. a second computation means that determines at least position coordinates of the character in the scene on the display device from a motion vector of the

character based on an operation inputted by the user as seen from a second viewpoint (*lines 31-35 of column 6; lines 26-31 of column 11 as cited above*),

v. an image drawing means that draws a three-dimensional image of said character based on said current viewpoint (*lines 6-10 of column 2: "...image signal generating means for generating an image signal due to shooting the player object by a virtual camera selected by the camera selecting means."*), in accordance with said position coordinates of said character obtained by said first computation means or said second computation means (*lines 31-35 of column 11: "In the step S8 the RSP 122 performs a rendering process. That is, the RCP 12 under the control of CPU 11 performs transformation (coordinate transformation and frame memory rendering) on the image data to display a movable object..."*).

36. As shown in the rejection of claim 3, the limitation "wherein the second computation step determines at least position coordinates of the character in the scene after switching the viewpoint, when the operation input decision means decides the operation input from the operation device is maintained, as long as an operation is inputted by the user before switching the viewpoint, by using the motion vector of the character motion based on the operation" is met by the combination of Kawagoe et al. and Sonic Adventure.

Response to Arguments

37. Applicant's arguments with respect to prior art rejections have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent No. 5566280 to Fukui et al.
- U.S. Patent No. 6034692 to Gallery et al.
- U.S. Patent Nos. 6354944 and 6126545 to Takahashi et al.
- U.S. Patent Nos. 6283857 and 6155926 to Miyamoto et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Repko whose telephone number is (571)272-8624. The examiner can normally be reached on Monday through Friday 8:30 am -5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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